

REMARKS

In response to the Office Action mailed December 31, 2007, Applicants respectfully request reconsideration. To further the prosecution of this application, each of the rejections in the Office Action has been carefully considered and is addressed below. The application, as presented, is believed to be in condition for allowance.

Objections to the Specification

The Office Action objects to the specification, asserting that it fails to provide a proper antecedent basis for the claimed subject matter of claim 3 (Office Action, page 2). Applicants have amended claim 3 to recite, "The method of claim 2, wherein the event command does not specify the amount by which the retention period is to be reduced, and wherein the act (B) further comprises an act of determining the amount by which the retention period is to be reduced by referring to information stored within or accessible to the CAS system." Similar amendments have been made to claims 22 and 41.

Support for claim 3 can be found in numerous places in the specification including for example, page 22, lines 25-28, which states "[f]or an event based reduction, the new retention period may be specified in the request, or the storage system may have previously-stored information specifying the length of the new retention period triggered by the event." It should be appreciated that the above-quoted portion of the specification describes one example of a way in which the amount by which the retention period is to be reduced can be determined when the event command does not specify this information. However, claim 3 is not limited in this respect, as the amount by which a retention period is to be reduced can be determined in any suitable way, when this information is not specified in the event command.

Rejections Under 35 U.S.C. §101

The Office Action asserts that claims 1-80 are rejected under 35 U.S.C. §101 because the Examiner considers a computer readable medium to include non-tangible carrier waves, which the Office Action asserts do not fall within statutory category. Initially, Applicants note that only claims 20-38 and 65-71 recite a computer readable medium, and claims 1-19, 39-64, and 72-80 do

not. Thus, Applicants assume that the rejection of claims 1-19, 39-64, and 72-80 under 35 U.S.C. §101 is an error and that the rejection of these claims under §101 will be withdrawn in the next Office Action. If the rejection of these claims is to be maintained, clarification is respectfully requested as to why the Examiner believes these claims do not satisfy the requirements of §101.

Claims 20-38 and 65-71 have been amended to recite a computer readable **storage** medium, which is a tangible manufacture and is therefore within a statutory category. The Office Action cites ¶44 of the specification, in support of the interpretation that a computer readable medium includes a carrier wave. However, this section of the specification describes types of suitable **transmission** media on which communications may be exchanged between devices in a network. In contrast, the specification later describes non-limiting examples of computer readable **storage** media which are tangible (e.g., computer memory, floppy disk, compact disk, a tape, etc.) (page 39, lines 24-28). Accordingly, Applicants request that the rejection under 35 U.S.C. §101 be withdrawn.

Rejections Under 35 U.S.C. §103

The Office Action rejects claims 1-10, 14, 15, 17, 20-29, 33, 34, 36, 39-48, 52, 53, 55, 58-63, 65-70, 72-77, 79, and 80 under 35 U.S.C. §103(a) as purportedly being obvious over US Patent Publication No. 2004/0249871 ("Bazoon") in view of US Patent Publication No. 2004/0083347 ("Parson"), and rejects claims 11-13, 16, 18, 19, 30-32, 35, 37, 38, 49-51, 54, 56, 57, 64, 71, and 78 under 35 U.S.C. §103(a) as purportedly being obvious over Bazoon and Parson, in combination with various other references. Applicants respectfully traverse each of these rejections.

A. Independent Claims 1, 20, 39, 58, 65, and 72

Each of the independent claims relates to reducing a previously-defined retention period for a unit of data stored on a storage system, **where the retention period defines a period during which the unit of data cannot be deleted**. Prior to this Amendment, the language in each independent claim that recites that a retention period for a unit of data defines a period during which the unit of data cannot be deleted was located in the preamble of these claims (i.e., claims 1, 20, 39, 58, 65, and 72). During the telephone interview of January 9, 2007 (summarized in Applicants'

Reasons for Pre-Appeal Brief Request for Review of February 27, 2007 and Appeal Brief of May 7, 2007), the Examiner indicated that he was not giving this language patentable weight because it appeared in the preamble. For the reasons explained in Applicants' Appeal Brief of May 7, 2007, Applicants disagree that this language should not be given patentable weight because it appears in the preamble.

Now that the Examiner has re-opened prosecution, to remove any question of whether this language should be given patentable weight, Applicants have removed it from the preambles of the independent claims and inserted it into the body of each of the claims. None of the cited references, including the primary reference, Bazoon, teach or suggest a retention period as claimed.

Most notably, Bazoon discloses the use of a storage period for a document that is fundamentally different from the claimed retention period. As explained in more detail below, the storage period of Bazoon defines a **maximum** period during which a document is permitted to exist in a knowledge repository, as at the expiration of this period the document is automatically deleted. By contrast, a retention period for a unit of data defines a **minimum** period during which the unit of data **must** exist on the storage system (i.e., the unit of cannot be deleted during the retention period).

B. Discussion of Bazoon

Bazoon is directed to a system and method for automatically removing documents from a knowledge repository (Abstract). Bazoon discloses that knowledge repositories have been used extensively, and that the size of their document databases has grown as more documents have been added (§0004). The growth of these databases presents problems in that it is more difficult to locate relevant documents, and the increased amount of data may slow down processing in the overall system (§0004-§0005). Bazoon discloses that though it is important to remove outdated documents to address these problems, system administrators do not have a significant amount of time to devote to such removal (§0006).

The system of Bazoon addresses this problem by providing for the automatic removal of documents from a knowledge repository (§0011). Bazoon discloses that a storage period may be assigned to documents in a knowledge repository. In the system of Bazoon, a storage period is defined as a value or value range which tracks the amount of time remaining for the document to

stay in a database (§0020). That is, a storage period defines a maximum period of time that a document is allowed to exist in the knowledge repository (§0020). Thus, when the storage period of a document has expired, the document is automatically removed from the knowledge repository (§0024).

C. Discussion of Parson

Parson is directed to a method for incrementally reorganizing hash tables (§0009). The system of Parson incrementally builds a new hash table as used entries from an aging hash table are copied into the new hash table (§0048). Parson suggests that the method described therein has advantages over alternatives, such as content addressable memory (CAM), because the system of Parson does not use interrupt timers or other active means to search a hash table for removing expired entries from the table (§0081). CAM is memory that allows key-oriented information to be stored and quickly retrieved (§0003).

D. Each of Claims 1, 20, 39, 65, and 72 Patentably Distinguishes Over the Combination of Bazoon and Parson

The Office Action rejects each of the independent claims under 35 U.S.C. §103(a) as purportedly being obvious over Bazoon in view of Parson.

Each independent claim relates to reducing a retention period for a unit of data stored on a storage system, wherein the retention period defines a period during which the unit of data cannot be deleted from the storage system. The Office Action asserts that §0022 Bazoon discloses establishing a retention period for a unit of data, and that the length of the retention period can be reduced (Page 4, lines 3-4), and also that §0035 of Bazoon discloses “retention period during which the at least one unit of data cannot be deleted.” Applicants respectfully disagree.

In §0022, Bazoon describes that the **storage period** of a document may be reduced in response to a determination that the document is not useful. In §0035, Bazoon describes a document removal process which is configured to remove documents from the knowledge repository that have expired storage periods. In neither of these sections does Bazoon disclose that the storage period defines a period during which a unit of data (e.g., a document) cannot be deleted, as required by each of the independent claims.

The Office Action asserts that one of ordinary skill in the art would deduce that unless the storage period of a document has expired, the document cannot be deleted/removed (Office Action, page 4). Applicants respectfully disagree.

Although not stated as such, the Examiner's position essentially is that the term "storage period" inherently defines a period during which a document cannot be deleted. The rejection is clearly improper on those grounds, as the standard for making an inherency rejection is undoubtedly not met.

As MPEP §2112 makes clear, the bar is extremely high for establishing an inherency rejection. That is, "[t]o establish inherency, the extrinsic evidence 'must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill. Inherency, however, may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient.'"

There is simply nothing in Bazoon which suggests that a storage period must necessarily define a period during which a document cannot be deleted. Even more strikingly, Bazoon specifically defines a storage period otherwise – i.e., as a period after which a document must be deleted.

That is, in the system of Bazoon, simply because documents with unexpired storage period **are not** automatically removed by the document removal process, does not speak to whether or not the documents **cannot** be removed by other processes (e.g., a deletion from an application program) before the storage period expires.

Bazoon in no way discloses that storage periods define a time during which a unit of data **cannot** be deleted as recited in the independent claims. Consequently, Bazoon does not disclose a retention period during which the at least one unit of data cannot be deleted from the at least one CAS system, as recited in each of the independent claims, and therefore necessarily does not disclose sending or receiving a request to reduce the length of the retention period and/or reducing the length of the retention period in response to such a request.

Bazoon also fails to disclose the limitation of claims 1, 20, 39, 65, and 72 that recite, "...at least one content addressable storage (CAS) system wherein the at least one host identifies units of

data on the at least one CAS system using content addresses each generated based, at least in part, on at least a portion of the content of the corresponding unit of data...” The Office Action concedes that Bazoon does not disclose any such CAS system, but asserts that Parson discloses a CAS system in ¶0081 (Office Action, page 4). Applicants respectfully disagree.

The Office Action appears to assert that the CAS system recited in the claims reads on the CAM disclosed by Parson. However, it should be appreciated that accessing data using these two types of systems is fundamentally different. As shown in Figure 1 of Parson, a CAM stores information by associating a data unit with a key. In a CAM, the key for a particular data unit is selected from a large range of possible key values, and the key is mapped to an integer index using a hash function (¶0022). To access data from the CAM, a hash function is applied to a key value and the resulting integer index identifies the location in the CAM at which the corresponding key and data unit are stored. Thus, in response to supplying a hash of a key value to the CAM, the data that corresponds to the key value is returned from the CAM. In contrast, each of the independent claims recites a CAS system, wherein at least one host identifies units of data on the at least one CAS system **using content addresses each generated based, at least in part, on at least a portion of the content of the corresponding unit of data.** Neither the key value, or the hashed key value (e.g., integer index) disclosed in Parson is based, at least in part, on at least a portion of the content of the corresponding unit of data. Rather, in Parson the key value for a data item is hashed to generate an identifier that can be used to access the data item. The data item itself is not hashed. Thus, each of independent claims 1, 20, 39, 65, and 72 patentably distinguishes over Parson, because data units in the CAM are identified by key values and not by content addresses which are generated based, at least in part, on at least a portion of the content of the corresponding unit of data, as recited in each of these claims.

In view of the foregoing, it should be appreciated that Bazoon and Parson, taken alone or in combination fail to disclose or suggest the use of a retention period during which a unit of data cannot be deleted, and fail to disclose or suggest a CAS system wherein a host computer identifies units of data on the at least one CAS system using content addresses each generated based, at least in part, on at least a portion of the content of the corresponding unit of data. Thus, each of claims 1,

20, 39, 65, and 72 patentably distinguishes over the combination of Bazoon and Parson, and it is respectfully requested that the rejection of these claims be withdrawn.

Claims 2-19 depend from claim 1, claims 21-38 depend from claim 20, claims 40-57 depend from claim 39, claims 59-64 depend from claim 58, claims 66-71 depend from claim 65, and claims 73-80 depend from claim 72. Each of these dependent claims is allowable for at least the same reasons as its respective base claim, and it is respectfully requested that the rejection be withdrawn.

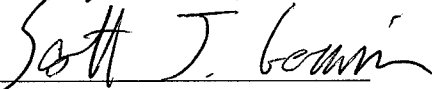
CONCLUSION

In view of the above amendment, applicant believes the pending application is in condition for allowance.

Applicant believes no fee is due with this response. However, if a fee is due, please charge our Deposit Account No. 23/2825, under Order No. E0295.70195US00 from which the undersigned is authorized to draw.

Dated: March 28, 2008

Respectfully submitted,

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